CLAIMS

What is claimed is:

1. A system that facilitates utilizing an optical medium, comprising:

a component that provides concurrent recordation of and playback from an optical medium, the playback starting at time (t_x) and the recordation starting at time (t_y), wherein $t_x \neq t_y$.

2. The system of claim 1, recordation refers to a non-real-time data stream.

3. The system of claim 1, playback refers to a real-time data stream.

4. The system of claim 3, the component dynamically adjusts required data rates for the real-time data stream.

5. The system of claim 1, comprising a verification component that determines data transfer capabilities of the optical medium.

6. The system of claim 5, the data transfer capabilities comprising at least one of minimum data transfer rate, read speed, burn speed, seek times and buffer size.

7. The system of claim 1, the optical medium comprising at least one of: a compact disc and a digital video disc (DVD).

8. The system of claim 1, the optical medium comprising audio data.

9. The system of claim 1, comprising at least one buffer that holds information from playback of the medium.

10. The system of claim 9, the at least one buffer has a minimum buffer capacity, the minimum buffer capacity is a function of read speed and at least one seek time.

11. The system of claim 1, further comprising a buffer controller that controls at least one of creation and use of at least one buffer.

12. The system of claim 11, the buffer controller performs a utility-based analysis in connection with buffer access.

13. The system of claim 12, the utility-based analysis based in part on a probabilistic-based determination of cost associated with saving data to the buffer.

14. The system of claim 12, the utility-based analysis based in part on a probabilistic-based determination of cost associated with retrieving data from the buffer.

15. The system of claim 1, the optical medium has a guaranteed minimum data transfer rate.

16. The system of claim 15, the guaranteed minimum data transfer rate is at least about 176 KBps.

17. The system of claim 1, comprising a component that provides concurrent playback of a plurality of data streams from the optical medium.

18. The system of claim 17, the data streams comprising audio data.

19. The system of claim 17, the plurality of data streams comprising at least a first data stream and at least a second data stream, such that the first data stream starts playing at t_x and the second data stream starts playing at t_y, wherein $t_x \neq t_y$.

20. The system of claim 1, comprising a continuity component that provides concurrent recordation of a plurality of data streams in parallel from the optical medium.

21. The system of claim 20, the plurality of data streams comprising at least a first data stream and at least a second data stream, such that the first data stream starts recording at t_x and the second data stream starts recording at t_y, wherein $t_x \neq t_y$.

22. The system of claim 20, the continuity component analyzes a subset of the data streams and dynamically orders reading of respective data streams of the subset to mitigate stream break-up.

23. The system of claim 20, the continuity component analyzes a subset of the data streams and dynamically prognoses potential starvation of any of the data streams, and takes remedial action to mitigate the starvation.

24. The system of claim 23, the continuity component employs a probabilistic-based utility analysis in connection with providing a prognosis.

25. A method of utilizing optical media comprising:

initiating a first operation from the optical media at time t_x; and

initiating at least a second operation from the optical media at time t_y while the first operation is currently in progress, wherein $t_x \neq t_y$.

26. The method of claim 25, the first operation comprising reading a real-time data stream.

27. The method of claim 25, the at least a second operation comprising one of reading a real-time data stream and a non-real-time data stream.

28. The method of claim 26, transferring the real-time data stream to a first buffer for temporary storage at a sufficient rate to allow the data stream associated with the second operation to transfer to a second buffer without interrupting the first operation.

29. The method of claim 28, comprising:

before the second operation begins, determining whether a calculated cost of accessing the optical media exceeds any one of the following: a threshold and a calculated cost of retrieving the data stored in the first buffer; and

retrieving the data from the first buffer during the second operation when the calculated cost of accessing the optical media exceeds at least one of the threshold and the cost of retrieving the data from the first buffer.

30. The method of claim 25, comprising verifying data transfer capabilities of an optical hardware device that is employed to run the optical media.

31. The method of claim 30, verifying the data transfer capabilities comprising performing at least one of the following:

checking the optical hardware device to determine whether it is running in constant angular velocity (CAV) mode;

determining at least one of seek times and read performance across the optical media for reading a non-real time data stream from the optical media; and

determining whether minimum buffer requirements are satisfied.

32. The method of claim 31, determining read performance across the optical media to facilitate ascertaining the optical hardware device's ability to read the optical media comprising:

reading at least a first amount of data from the optical media such that the device's internal media cache is not concurrently caching the first amount of data when the reading of the first amount of data starts; and

skipping ahead an increment of time that is sufficient to gain characteristic read performances across the optical media and repeat reading the amount of data from the optical media until substantially all of the optical media is read.

33. The method of claim 32, the first amount of data being about 8 MB.

34. The method of claim 32, the increment of time being about 5 minutes.

35. The method of claim 32, wherein each amount of data is substantially equal in size.

36. The method of claim 32, wherein the amount of data is determined based at least in part upon the device's internal buffer size.

37. The method of claim 31, determining seek times across the optical media to facilitate ascertaining the optical hardware device's ability to seek on the optical media comprising:

dividing the optical media into a number of sections, the number of sections comprising at least a first section and at least a second section, such that the device's internal cache does not pre-cache the data from the second section when told to read the start of the first section; and

for all pairs of sections comprising any two sections, ensuring the device is reading from the first section and then causing the drive to seek to the second section to gain characteristic seek performances across the optical media.

38. The method of claim 37, wherein all sections are of substantially equal size.

39. The method of claim 37, wherein the section size is determined based at least in part upon the device's internal buffer size.

40. The method of claim 37, wherein ensuring to read from the first section comprises reading an amount of data larger than the device's internal buffer size from some section other than the first and second sections.

41. The method of claim 37, wherein ensuring to read from the first section comprises sending a READ10 command with a force unit access (FUA) bit set to one.

42. The method of claim 37, wherein causing the drive to seek to the second section comprises using a READ10 command with a force unit access (FUA) bit set to one.

43. The method of claim 37, wherein causing the drive to seek to the second section comprises using a SEEK command.

44. The method of claim 37, wherein the section size is about 5 minutes.

45. The method of claim 37, wherein ensuring to read from the second section comprises reading an amount of data larger than the device's internal buffer size from the first section.

46. The method of claim 31, the minimum buffer requirements being a function of read speed and seek times.

47. A method of utilizing optical media comprising:

starting to read at least a first real-time data stream from the optical media at time t_x; and

starting to read at a least a second real-time data stream from the optical media concurrently with the first real-time data stream at time t_y, wherein $t_x \neq t_y$.

48. The method of claim 47, the first data stream being played *via* a first playback output and the second data stream being played via a second playback output.

49. A method of utilizing optical media comprising:

starting to read at least a first non-real-time data stream from the optical media at time t_x; and

starting to read at a least a second non-real time data stream from the optical media concurrently with the first non-real-time data stream at time t_y, wherein t_x is not equal to t_y.

50. A data packet adapted to be transmitted between two or more computer processes facilitating reading multiple concurrent data streams from optical media, the data packet comprising:

information associated with reading a real-time data stream from the optical media at time t_x and concurrently reading a non-real-time data stream from the optical media at time t_y, wherein $t_x \neq t_y$.

51. A computer-readable medium having stored thereon the following computer executable components:

a component that provides for concurrently reading a non-real-time data stream from optical media starting at t_y and reading a real-time data stream from the optical media starting at t_x, wherein $t_x \neq t_y$.

52. A system that facilitates employment of optical media, comprising:

means for starting to read at least one real-time data stream from the optical media at time t_x; and

means for starting to read one or more non-real-time data streams from the optical media concurrently while it is playing at time t_y, wherein $t_x \neq t_y$.

53. A recording system, comprising:

a component that provides concurrent recordation of and playback of respective media from an optical medium, the playback starting at time (t_x) and the recordation starting at time (t_y), wherein $t_x \neq t_y$; and

an artificial intelligence (AI) component that performs a utility-based analysis in connection with the recordation and playback.

54. The system of claim 53, the AI component comprising a classifier.

55. The system of claim 53, the AI component inferring when to initiate recordation.

56. The system of claim 53, further comprising a verification component that determines data transfer capabilities of the optical medium.

57. The system of claim 53, the data transfer capabilities comprising at least one of minimum data transfer rate, read speed, burn speed, seek times and buffer size.

58. The system of claim 53, the AI component comprising at least one of: a support vector machine (SVM), a naïve Bayes model, a Bayesian network, a decision tree, a Hidden Markov Model (HMM), neural network, data fusion engine.